

**Description of new species of Nassariidae
(Mollusca, Neogastropoda)
from the Pacific Ocean**

by W. O. CERNOHORSKY

Abstract. — Two new species of Nassariidae are described from the tropical Pacific Ocean. *Nassarius (Zeuxis) richeri* n. sp. from New Caledonia and *Nassarius (Zeuxis) poupini* n. sp. from French Polynesia, are both new to science and *N. (Z.) dijki* (K. Martin) is recorded living in the Marquesas Islands, French Polynesia.

Résumé. — Description de nouvelles espèces de Nassariidae (Mollusca, Neogastropoda) de l'océan Pacifique. — Deux nouveaux Nassariidae sont décrits des pentes insulaires du Sud Pacifique. *Nassarius (Zeuxis) richeri* n. sp. est originaire de Nouvelle-Calédonie, par 105-110 m; *Nassarius (Zeuxis) poupini* n. sp. est connu de plusieurs îles de Polynésie française (archipels de la Société et des Tuamotu), entre 90 et 240 m. *Nassarius (Z.) dijki* (K. Martin), qui n'était connu vivant que de la Réunion, dans l'océan Indien, est maintenant signalé de l'archipel des Marquises, par 460 m.

W. O. CERNOHORSKY, *Auckland Institute and Museum, Private Bag, Auckland, 1, New Zealand.*

INTRODUCTION

Since the last written report on the family Nassariidae from New Caledonian waters (CERNOHORSKY, 1991), additional material has been examined from the outer slopes of New Caledonia and French Polynesia. This material was collected respectively by Dr B. RICHER DE FORGES (Centre ORSTOM, Nouméa) operating from R.V. *Alis*, and Mr J. POUPIN (Service Mixte de Contrôle Biologique, Papeete) operating from R.V. *Marara*, and made available through Dr P. BOUCHET.

Family NASSARIIDAE

Genus NASSARIUS Duméril, 1806

Subgenus Zeuxis H. & A. Adams, 1853

***Nassarius (Zeuxis) richeri* n. sp.**

(Figs. 1-4)

Shell moderately small, up to 15.1 mm in length, elongate-ovate and slender, width 43 %-45 % of shell length, light in weight, teleoconch of 5 ½-6 convex whorls, protoconch of 2 ¾-

3 ¼ smooth, glassy-white embryonic whorls, ultimate turn finely carinate. First 3 ½-4 post-embryonic whorls prominently convex and sculptured with strong axial ribs which number from 17-26 on the antepenultimate whorl; axial ribs are bisected by overriding spiral cords which number from 5-6 on the antepenultimate whorl. Axial and spiral sculpture gradually becomes obsolete and absent on the last 1 ¾-2 whorls with the exception of the outer lip which bears 3-5 thin axial ribs, last two whorls with a prominent or weak subsutural groove; anterior of body whorl with 4-5 wide-spaced spiral threads, siphonal fasciole with 5-7 oblique cords. Aperture shorter than the spire, 42 %-47 % of shell length, outer lip weakly and narrowly variced, interior of outer lip with 12-19 moderately short denticles, base of outer lip occasionally with 4-5 small, pointed denticles at the margin; columella concave and with 2 basal denticles, remainder smooth apart from a distinct parietal denticle, columellar callus narrow and confined to the aperture, siphonal canal short, siphonal notch prominent. White in colour, spire whorls ornamented with 2 narrow, orange-brown bands adjacent to sutures, body whorl with 3 orange-brown bands, central band continuous or dilacerate, dorsal surface of body whorl with irregular, darker orange-brown streaks merging with spiral bands, giving the appearance of a brown blotch. Operculum and animal unknown.

TYPE LOCALITY : Area of Poindimié, New Caledonia, Programme LAGON, Stn. 830, 20°49' S, 165°19' W, 105-110 m. Leg. B. RICHER DE FORGES, ORSTOM, 10-I-1987.

DISTRIBUTION : To date known only from New Caledonia, in 105-110 m.

TYPE MATERIAL : Holotype in the Muséum national d'Histoire naturelle, Paris, length 13.4 mm, width 5.8 mm, height of aperture 5.6 mm. Four paratypes from the type locality are in the Muséum national d'Histoire naturelle, Paris.

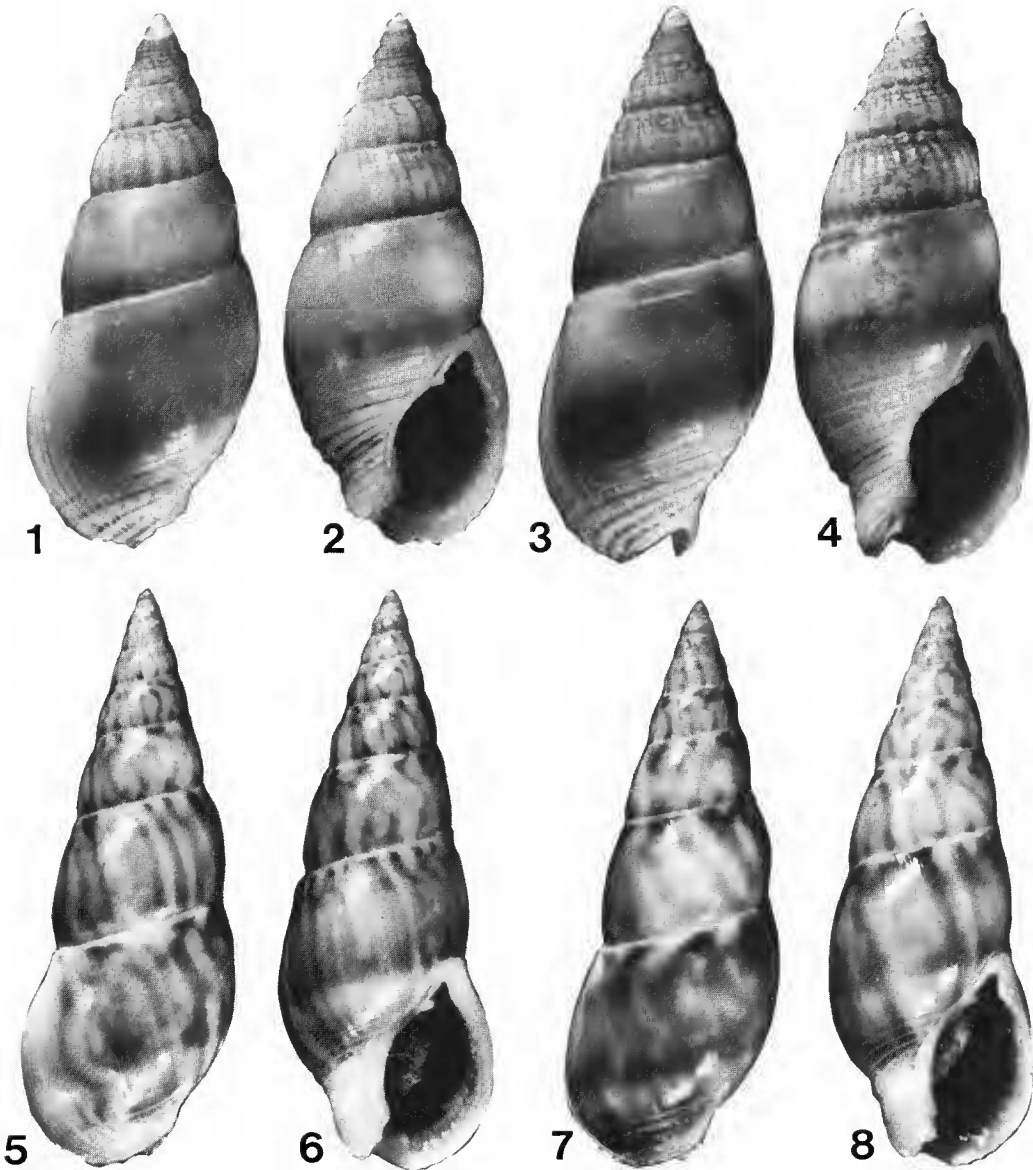
ETYMOLOGY : The species is named for Dr B. RICHER DE FORGES, Centre ORSTOM de Nouméa, who collected it during his survey of the benthic communities of the coral reef lagoon of New Caledonia.

REMARKS : *N. (Z.) richeri* is superficially similar to *N. (Z.) micans* (A. Adams, 1852), but the latter is a larger, more solid species with a much longer aperture, a narrow but prominent varix, and the basal striae are closer set and more numerous. *N. (Z.) micans* lacks the prominent sculpture of convex whorls with strong axial ribs and overriding spiral threads. The last 2 ½-3 ½ whorls are smooth in *N. (Z.) micans* whereas only the last 1 ¾-2 whorls are smooth in *N. (Z.) richeri*.

***Nassarius (Zeuxis) poupini* n. sp.**

(Figs. 5-8)

Shell moderately small in size, up to 29.2 mm in length (range 22.0-29.0 mm), elongate, shining smooth and solid, aperture short in relation to body whorl, width 35 %-42 % of shell length, teleoconch of 6 ¼-8 convex whorls, last whorl concavely adpressed at suture, conical protoconch of 3-3 ¼ white to fawn embryonic whorls, last 1 ½-1 ¾ embryonic whorls carinate; first 2 ½-3 ½ post-embryonic whorls with fine or strong axial ribs which are bisected by 4-5 spiral threads, spirals obsolete in some populations of *N. (Z.) poupini*, upper spire whorls with a fine subsutural groove which persists to the body whorl in a few individuals but is absent on last 3 whorls in the majority of specimens, last 3-3 ½ whorls smooth, anterior of body whorl with 3-6 wide-spaced striae, siphonal fasciole short and with 6-11 oblique cords.



FIGS. 1-8. — 1-2, *Nassarius richeri* n. sp., holotype, 13.4 mm, New Caledonia, stn 830, 105-110 m; 3-4, *Nassarius richeri* n. sp., paratype, 12.6 mm, New Caledonia, stn 830, 105-110 m; 5-6, *Nassarius poupini* n. sp., holotype, 26.5 mm, Huahine I, Society Is, French Polynesia, 130 m; 7-8, *Nassarius poupini* n. sp., paratype, 26.1 mm, Huahine I, Society Is, French Polynesia, 130 m.

Aperture considerably shorter than the spire, 35 %-43 % of shell length, outer lip with a moderately weak varix, interior of outer lip with 13-17 short denticles, base of outer lip occasionally with 4 small denticles; columella concave and with 2-11 small denticles and a parietal denticle, columellar callus narrow and confined to aperture, siphonal notch prominent. White to fawn in colour, ornamented with wavy orange-brown bands, axial bands merging with faint transverse bands on body whorl, some axial flames forming darker rhomboidal spots at sutures; interior of aperture either orange, purplish-brown or white. Operculum variable, yellowish-brown in colour with a dark brown blotch on left posterior margin, almost smooth in some individuals, other individuals with 3-5 small, irregular denticles anteriorly, some specimens with an operculum smooth on one side and minutely, irregularly serrated on the other side.

TYPE LOCALITY : Huahine Island, Society Islands, French Polynesia, 16°48' S & 150°58' W, 130 m. Leg. J. POUPIN, SMCB, 19-VI-1990.

DISTRIBUTION : From Huahine to Tahiti, Society Islands to Hao and Mururoa Atolls, Tuamotu Archipelago, in 90-240 m.

TYPE MATERIAL : Holotype in the Muséum national d'Histoire naturelle, Paris, length 26.5 mm, width 9.7 mm, height of aperture 9.9 mm. 14 paratypes from the type locality in MNHN; 21 paratypes from Hao Atoll, Tuamotu, 18°04' S & 141°01' W, 90 m (leg. J. POUPIN, 2-VI-1990) in MNHN; 9 paratypes from Mururoa Atoll, Tuamotu, 21°51' S & 138°58' W, 100 m (leg. J. POUPIN, 15-V-1990) in MNHN; 7 paratypes from Mururoa Atoll, 21°51' S & 139°00' W, 130 m (leg. J. POUPIN, 17-V-1990) in MNHN; 14 paratypes from Mururoa Atoll, 21°51' S & 139°01' W, 200 m (leg. J. POUPIN, 19-V-1991) in MNHN, and 2 paratypes from same locality in author's collection.

ETYMOLOGY : The species is named for Mr Joseph POUPIN, biologist for Service Mixte de Contrôle Biologique, Papeete, who obtained it and many other new invertebrate during deep-water dredging and trapping on the outer slopes of the islands of French Polynesia.

REMARKS : A single specimen of this new species has been sighted several years ago from the Great Pass, Vairao, Tahiti, 240 m (coll. J. TRONDLE). The Hao and Mururoa Atoll populations of *N. (Z.) poupini* have paler shells, lacking the intense colour ornamentation of Huahine populations. Furthermore, the protoconch and interior of aperture are white, and the axial ribs are thicker and more angulate and the overriding spiral sculpture is almost obsolete in the Hao and Mururoa populations.

N. (Z.) poupini is similar to some individuals of *N. (Z.) comptus* (A. Adams, 1852), especially the form *polita* Marrat, 1880 (non Bivona, 1832), but the former species can be readily separated on features of short aperture, long, slender spire whorls and shining appearance as well as the lack of a sutural girdle and different sculpture of post-embryonic whorls.

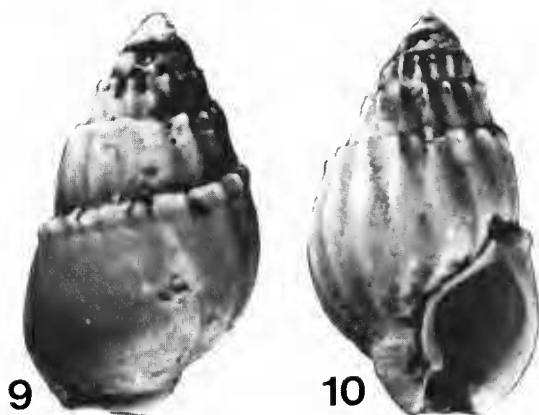
***Nassarius (Zeuxis) dijki* (K. Martin, 1895)**

(Figs. 9-10)

Nassa (Niotha) dijki K. Martin, 1895 : 109, pl. 17, figs. 244, 244a, b.

Nassa dijki K. Martin, 1919 : 83.

Nassarius (Zeuxis) dijki (K. Martin); CERNOHORSKY, 1984 : 159, figs. 132, 133 (figd. lectotype); CERNOHORSKY, 1988 : 81, figs. 13-16.



FIGS. 9-10. — *Nassarius dijki* (K. Martin, 1895), 6.0mm, Nuku Hiva, Marquesas Is, French Polynesia, 460 m.

TYPE LOCALITY : Borehole at Grissee, depth 616-645 m, Soerabaja, L. Miocene of Indonesia.

DISTRIBUTION : Recorded living from 480-980 m at Reunion Island, Indian Ocean ; range now extends to French Polynesia.

The species was originally described from fossil deposits of Miocene age of Indonesia, and was recently recognized as living in several localities off Reunion Island, Indian Ocean (CERNOHORSKY, 1988). A specimen of the species has been found in Nuku Hiva, Marquesas Islands, French Polynesia, 8°59.4' S & 140°07' W, in 460 m, by Mr. J. POUPIN (27-VIII-1990). This represents a considerable eastward range extension from the Indian Ocean to the eastern Pacific.

Acknowledgements

I would like to thank the collectors and the staff of the department of molluscs, MNHN, for making this interesting material available to me. Special thanks are due to Ms Virginie HÉROS and Mr Guy DESCHAMPS, who sorted the very rich residue containing *Nassarius richeri*, and Mr P. LOZOUET, who took the photographs.

REFERENCES

- ADAMS, H., and A. ADAMS, 1853-58. — The genera of Recent Mollusca ; arranged according to their organization. London, vols. 1-3, pls. 1-138.
- CERNOHORSKY, W. O., 1984. — Systematics of the family Nassariidae (Mollusca : Gastropoda). *Bull. Auckland Inst. Mus.*, No. 14 : 1-356.

- 1988. — The Mitridae, Costellariidae and Nassariidae (Mollusca : Gastropoda) recently dredged at Reunion Island, Indian Ocean. *Rec. Auckland Inst. Mus.*, **25** : 75-85.
 - 1991. — Mollusca Gastropoda : On a collection of Nassariidae from New Caledonian waters. In : A. CROSNIER & P. BOUCHET (eds), Résultats des Campagnes Musorstom, Volume 7. *Mém. Mus. natn. Hist. nat.*, Paris, (A), **150** : 187-204.
- MARTIN, K., 1895. — Die Fossilien von Java auf Grund einer Sammlung von Dr. R. D. M. Verbeek, *Samml. geol. Reichsmus. Leiden*, N.S., **1** (2) : 1-132, pls. 1-20.
- 1919. — Unsere palaeozoologische Kenntnis von Java mit einleitenden Bemerkungen über die Geologie der Insel. Leiden, 158 pp., 4 pls.